

2020 Kansas Pronghorn Harvest Report

PERFORMANCE REPORT STATEWIDE WILDLIFE RESEARCH AND SURVEYS

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Kansas Department of Wildlife, Parks and Tourism

Brad Loveless
Secretary

Prepared by

Matt Peek
Research Biologist

Jake George
Wildlife Division Director

Rich Schultheis
Wildlife Research Supervisor



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Background – Pronghorn, often referred to by hunters as antelope, mostly exist in Kansas in the westernmost two to three tiers of counties, and mostly South of I-70. There's been a hunting season for pronghorn in western Kansas since 1974. The firearm pronghorn season has been four days long since 1990, starting on the first Friday in October. The archery pronghorn season was nine days long from 1985 to 2004, and encompassed the two weekends prior to the firearm season. Since 2005, the archery season has reopened on the Saturday following the firearms season and continued through the end of October. A muzzleloader only season was initiated in 2001. It has begun immediately after the archery season and ran for four days. Muzzleloader permit holders can also hunt with muzzleloader equipment during the four day firearms season, giving them eight days total.

Archery permits have been unlimited due to traditionally low success rates. Firearm and muzzleloader permit demand and success rates require these permits to be limited draw. They are allocated by preference point system. (Applicants with the highest number of preference points are awarded permits.) Demand for these permits has been high. In the last two seasons, the number of applicants has made two significant leaps to 1583 in 2019 and then 1928 in 2020 (Figure 1). In 2018, the Department moved the elk application deadline to the same as pronghorn due to changes in elk season dates, and then sent out multiple notifications of the deadline. This procedure was continued in 2020, plus license sales have generally increased due to Covid.

By state law, half of the limited-draw permits are awarded to landowner/tenants and half are awarded to general residents. Draw statistics from 2020 are provided in Appendix 1. Applicants are allowed to buy a preference point without applying for the permit, so preference points higher than necessary to draw sometimes show up in the draw stats. For example, in unit 2 firearms, one individual had 13 preference points, but five were all that were needed for a guaranteed draw.

Harvest – Pronghorn harvest and hunter activities are compiled annually through harvest reports sent to all pronghorn hunters. Paper report cards and postage paid tooth envelopes are initially sent to all hunters. After season, a direct link to an online harvest survey is e-mailed to nonrespondents for whom we have an active e-mail address. About a week later, a reminder email is sent. A week after that, all nonrespondents are sent a second mailing of the paper harvest survey. Two to three weeks later, a direct email is sent asking only one question about their overall harvest success (see Fig 6). Results are extrapolated to nonrespondents. Response rate by permit type in 2020 was: archery –67%; firearms – 81%; and muzzleloader – 93%.

A total estimate of 225 pronghorn were harvested in 2020. Total pronghorn harvest since hunting seasons were initiated in 1974 is provided in Figure 2. The 2020 harvest was down 3 from 2019 but was the 7th highest total harvest on record (since 1974).

Since 1986, all permits have been valid for any antelope. In 2020, an estimated 213 bucks and 12 does and fawns were harvested. The sex and age composition of the harvest since 1995 is provided in Figure 3. In recent years, over 90% of the harvest has consisted of yearling or older bucks. The estimated date of harvest is provided in Figure 4.

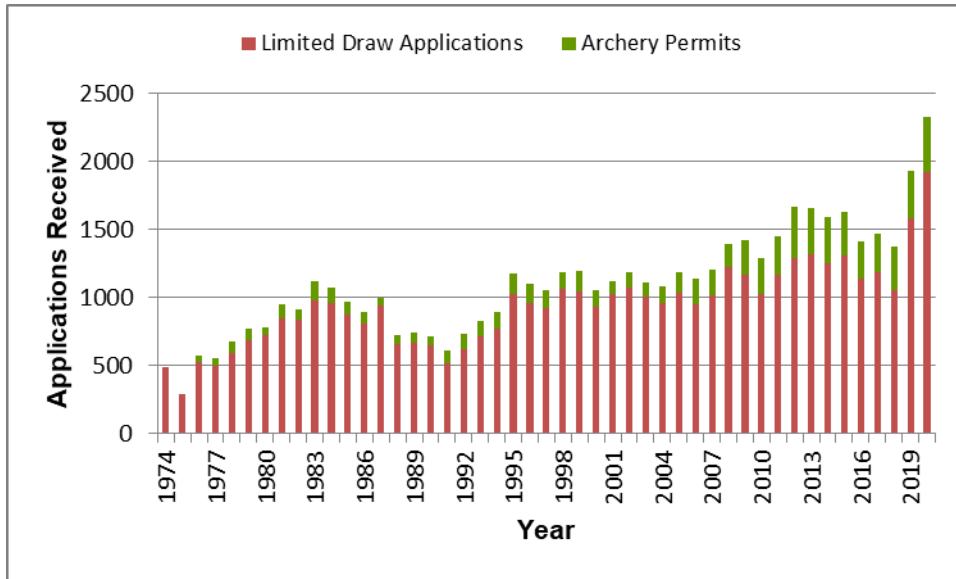


Figure 1. Pronghorn permit demand as indicated by limited draw (firearms and muzzleloader) permit applications and unlimited archery permit sales in Kansas since 1974.

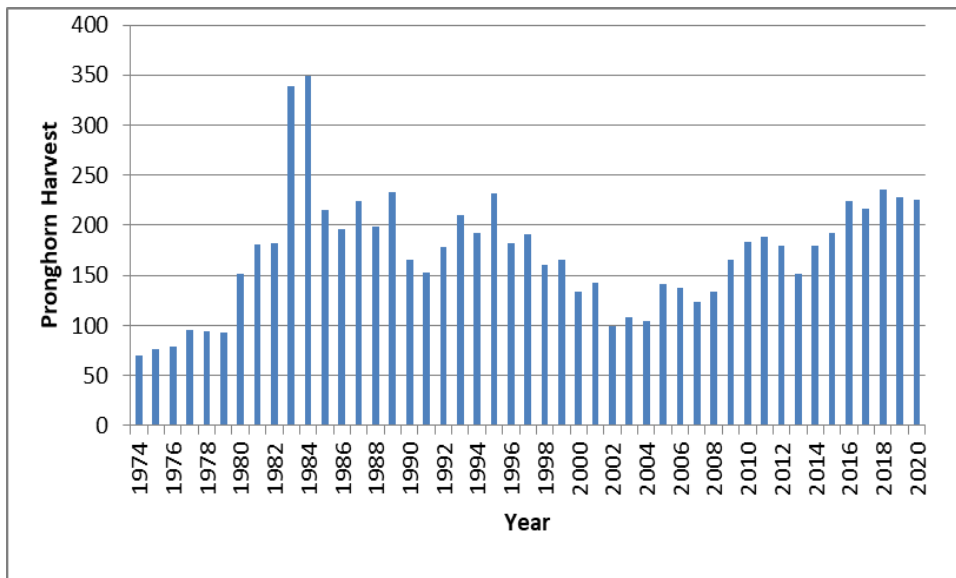


Figure 2. Total pronghorn harvest in Kansas since hunting seasons were initiated in 1974.

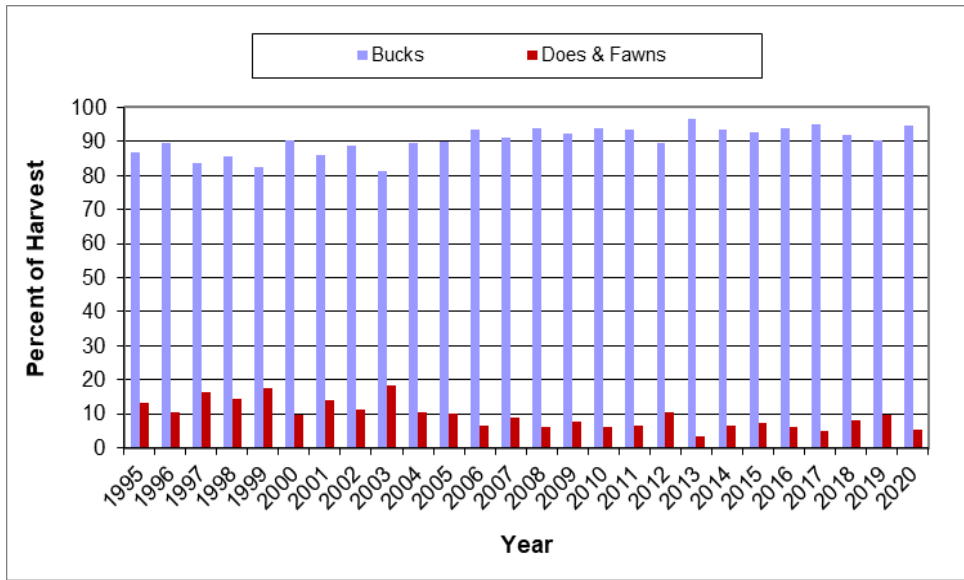


Figure 3. Sex and age composition of annual pronghorn harvest in Kansas since 1995.

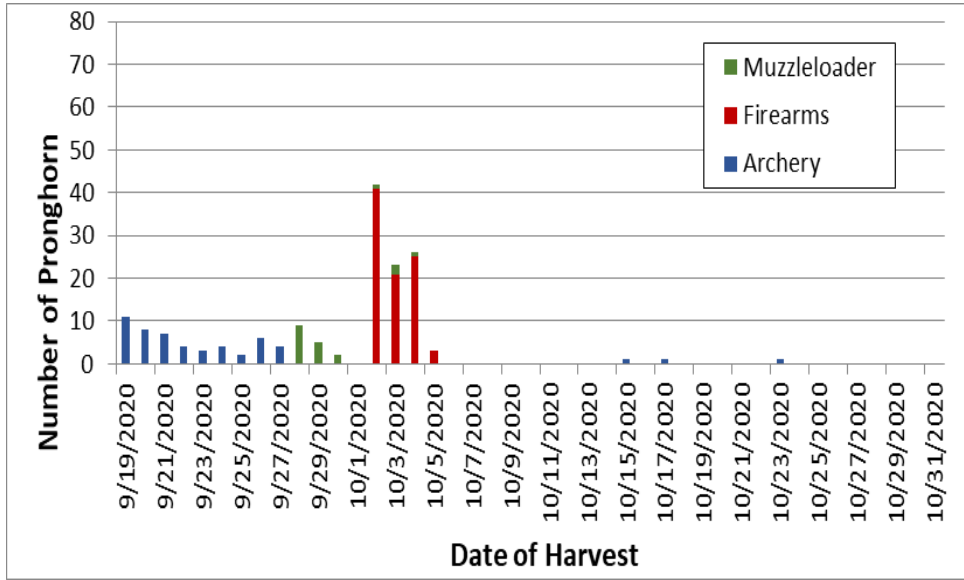


Figure 4. Estimated date of harvest of pronghorn taken in Kansas during the 2020 season (n=225) and the permit type by which they were taken.

Harvest by Weapon Type – The number of pronghorn permits sold by weapon type since 1995 is provided in Figure 5. Most notably, archery permit sales were up again this year to an all-time high of 402, surpassing the previous high of 380 in 2012. Harvest classification by permit type is presented in Figure 6. Harvest by permit type since 1995 is provided in Figure 7, and success rate by permit type is found in Figure 8.

Pronghorn hunters are asked to rank their hunt satisfaction on a 7-point scale ranging from extremely dissatisfied to extremely satisfied. This serves as a general indicator of hunt quality likely reflecting harvest success, pronghorn numbers, buck quality, access, crowding and various other factors of the hunt. Mean satisfaction by permit type since 2013 is found in Figure 9, and hunter satisfaction by permit type is found in Figure 10.

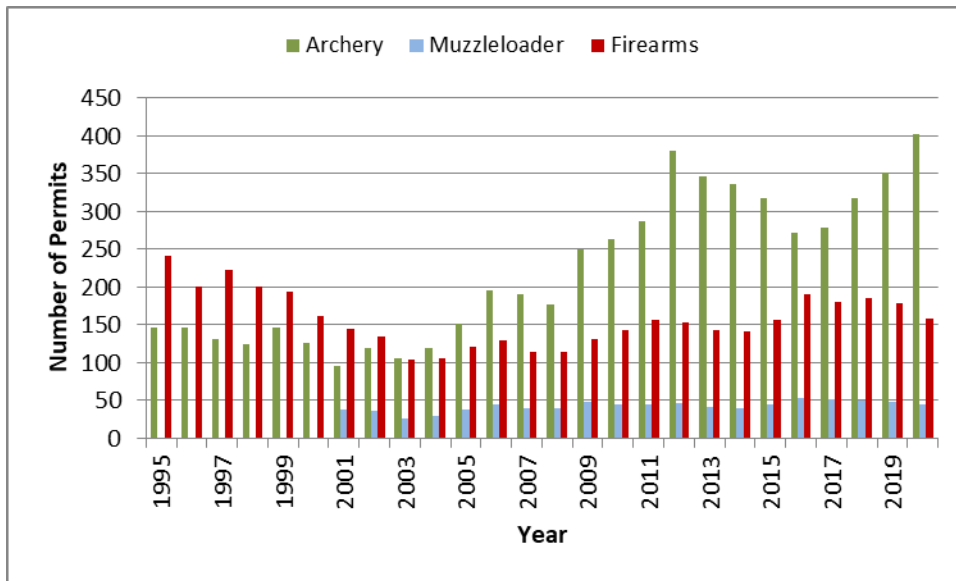


Figure 5. Permits sold by weapon type for pronghorn in Kansas since 1995.

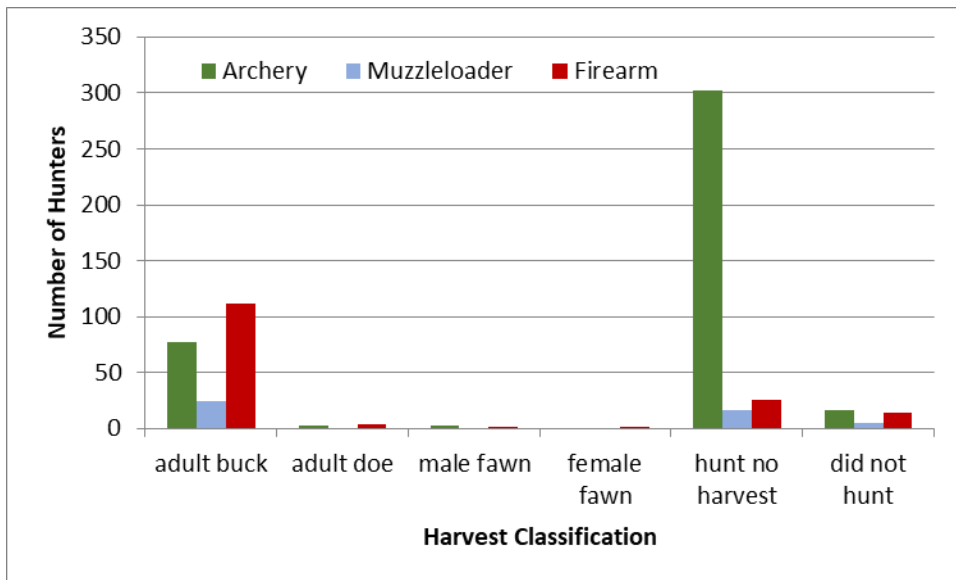


Figure 6. Harvest classification by permit type for 2020 Kansas pronghorn hunters.

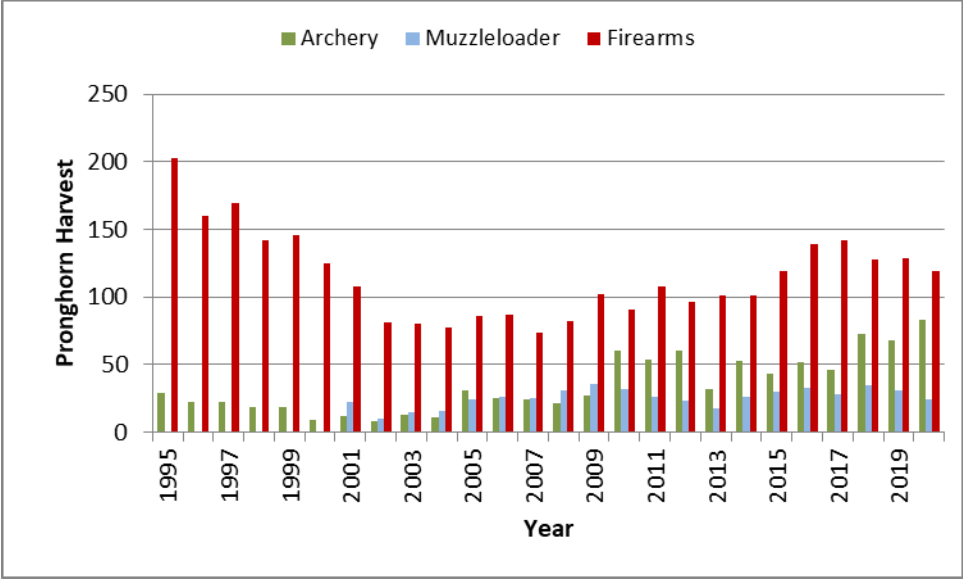


Figure 7. Pronghorn harvest in Kansas by permit type since 1995.

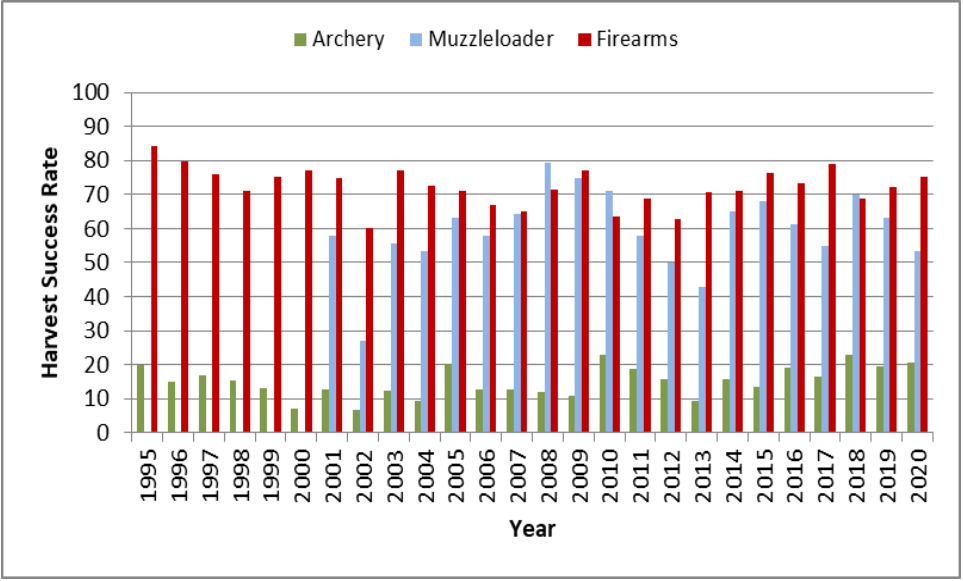


Figure 8. Harvest success rate by permit type for pronghorn in Kansas since 1995.

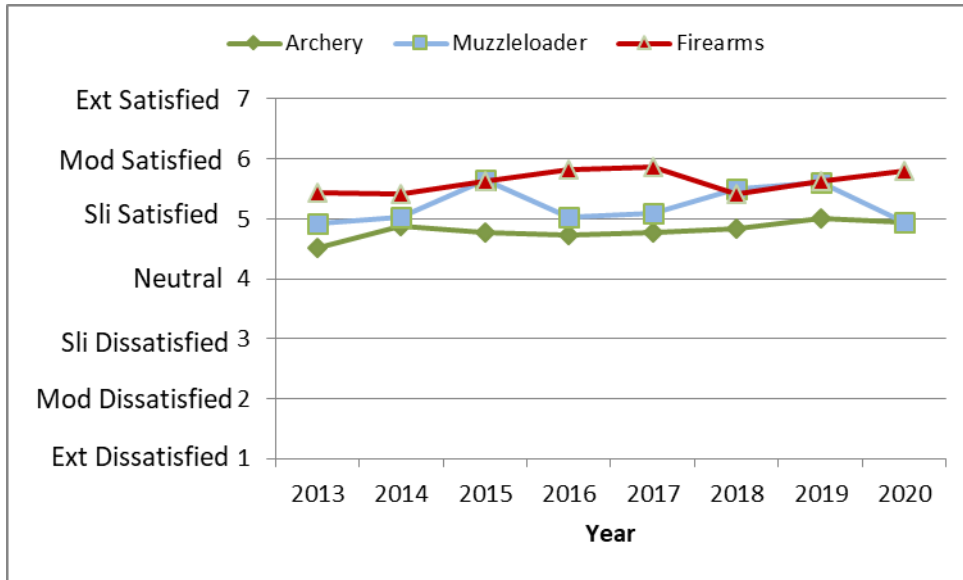


Figure 9. Mean pronghorn hunter satisfaction by permit type in Kansas since 2013.

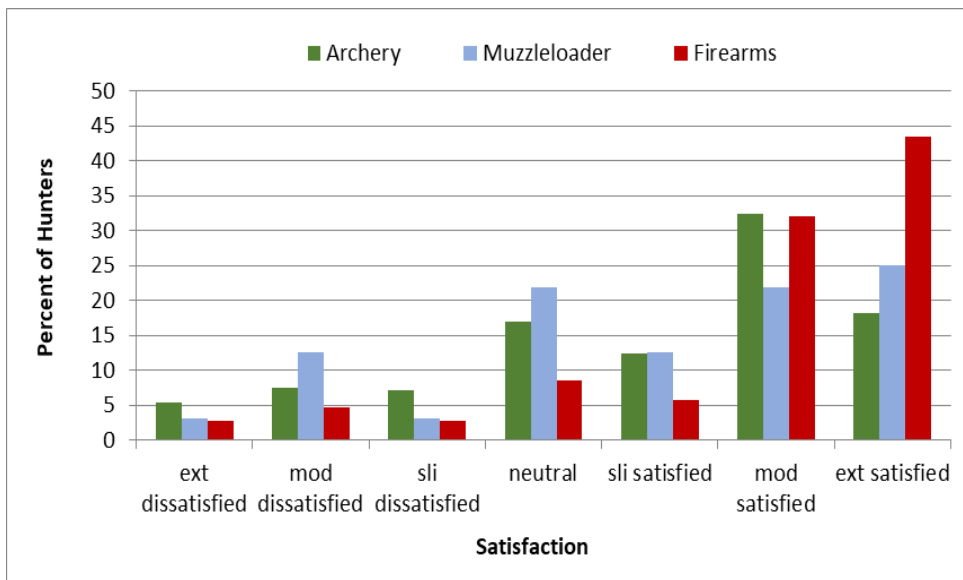


Figure 10. Hunter satisfaction by permit type during the 2020 Kansas pronghorn season.

Harvest by Unit – There are currently three management units open to pronghorn hunting in Kansas (Figure 11). These units, which are also deer management units, were adopted in 2001 in order to reduce confusion over big game unit boundaries. Pronghorn are generally uncommon in the easternmost parts of all three units. Firearm and muzzleloader permits are valid in one unit whereas archery permits are valid in all three, so unit analyses below are limited to firearms and muzzleloader permits.

Total firearm and muzzleloader permits allocated in each unit is provided in Figure 12. Total harvest by unit is found in Figure 13. Harvest success by unit is found in Figure 14. Mean Hunt satisfaction by unit is provided in Figure 15.

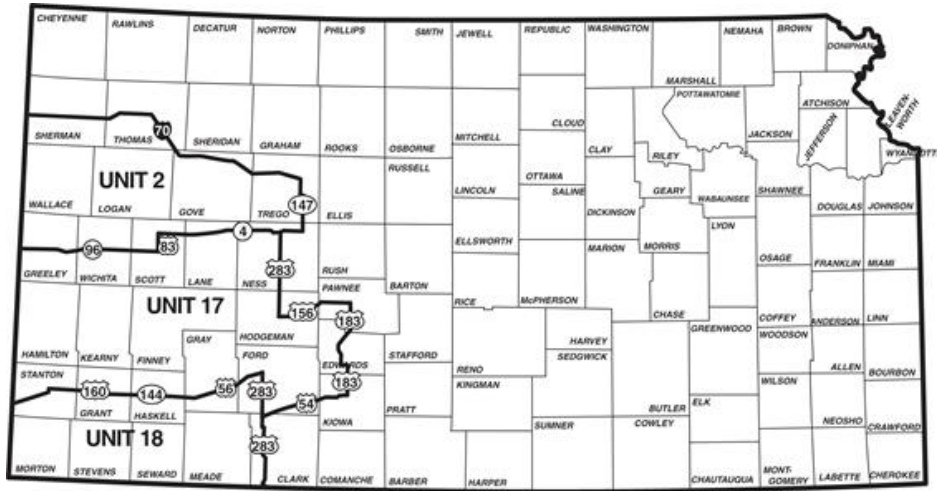


Figure 11. Kansas pronghorn management units.

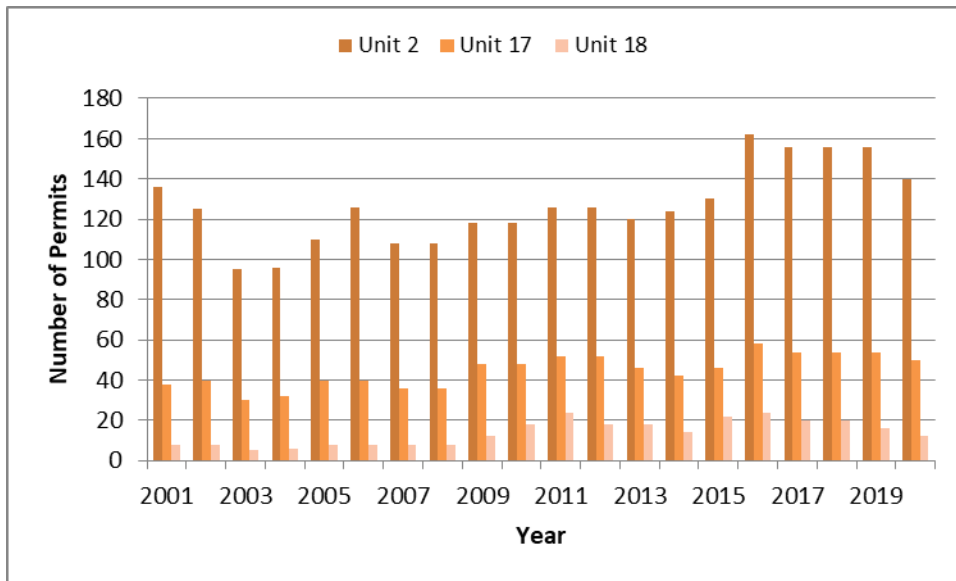


Figure 12. Number of firearm and muzzleloader permits issued in each of the three Kansas pronghorn management units since 2001.

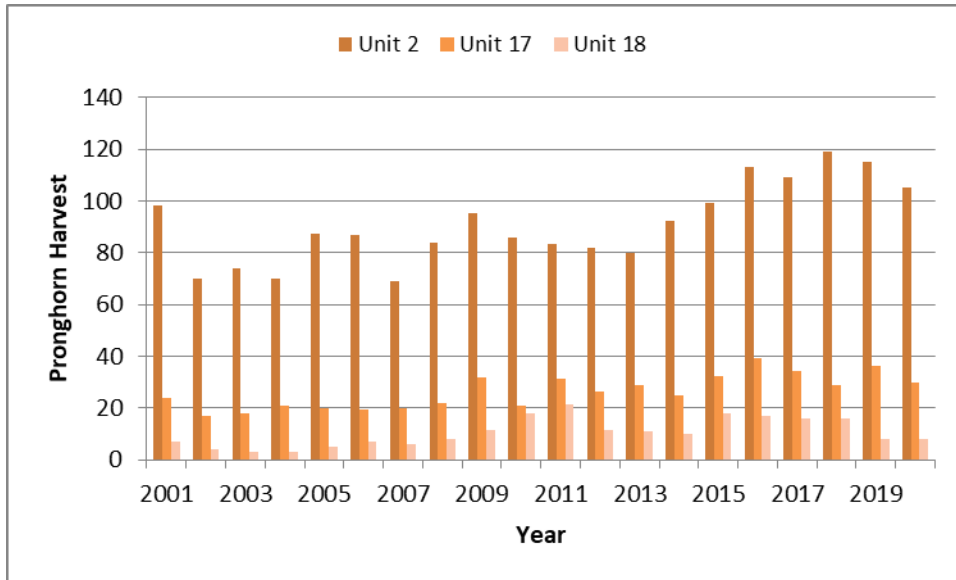


Figure 13. Pronghorn harvest in Kansas by management unit for firearm and muzzleloader permit holders since 2001.

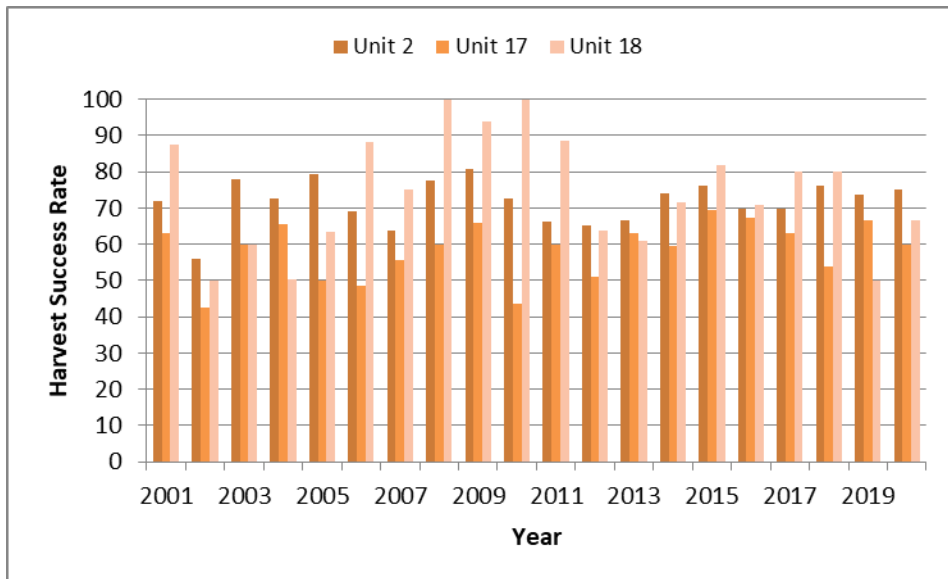


Figure 14. Harvest success rate by pronghorn management unit for firearm and muzzleloader permit holders in Kansas since 2001.

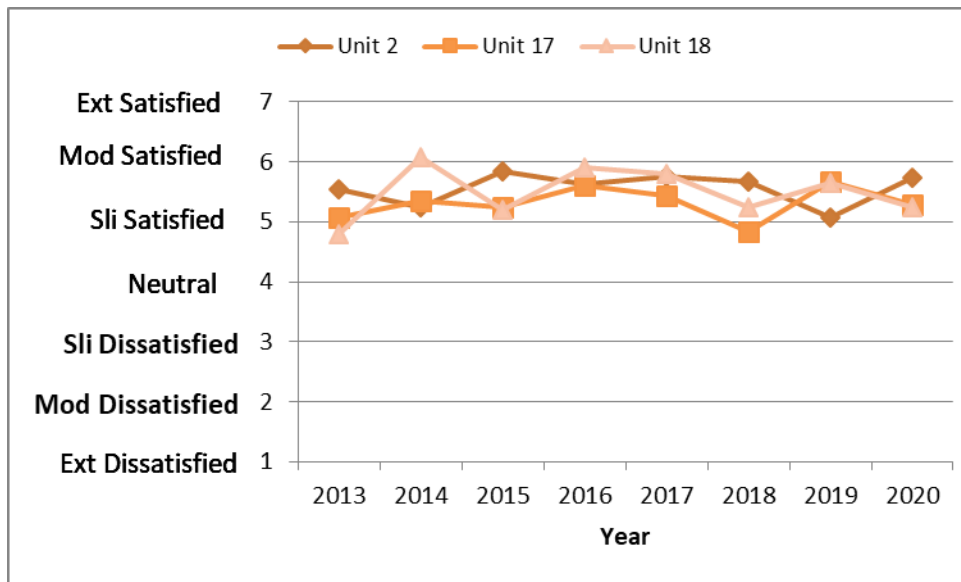


Figure 15. Mean pronghorn hunter satisfaction by unit for firearm and muzzleloader permit holders in Kansas since 2013.

Horn size – As part of the harvest report, the Department began asking hunters to provide horn length and circumference measurements to the nearest 1/8 of an inch in 2009. Hunters take the measurements themselves, and given the frequency of whole numbers (8, 9...) and even halves (8.5, 9.5...), this data should be considered an estimate. However, it still provides for a meaningful comparison with age data and is being considered as an alternative to tooth collection.

Frequency of horn lengths and circumferences can be found in Figures 16 and 17, respectively. A scatterplot of this data can be found in Figure 18.

Mean horn lengths and circumferences of pronghorn harvested in Kansas can be found in Figure 19. Mean horn length and circumference by management unit and weapon can be found in Figures 20 and 21, respectively. The means for both of these measurements have been pretty consistent over time. There is no difference in mean pronghorn horn size by unit. By weapon type, the mean horn length of pronghorn taken by archery hunters is slightly lower than that of pronghorn taken by firearm or muzzleloader.

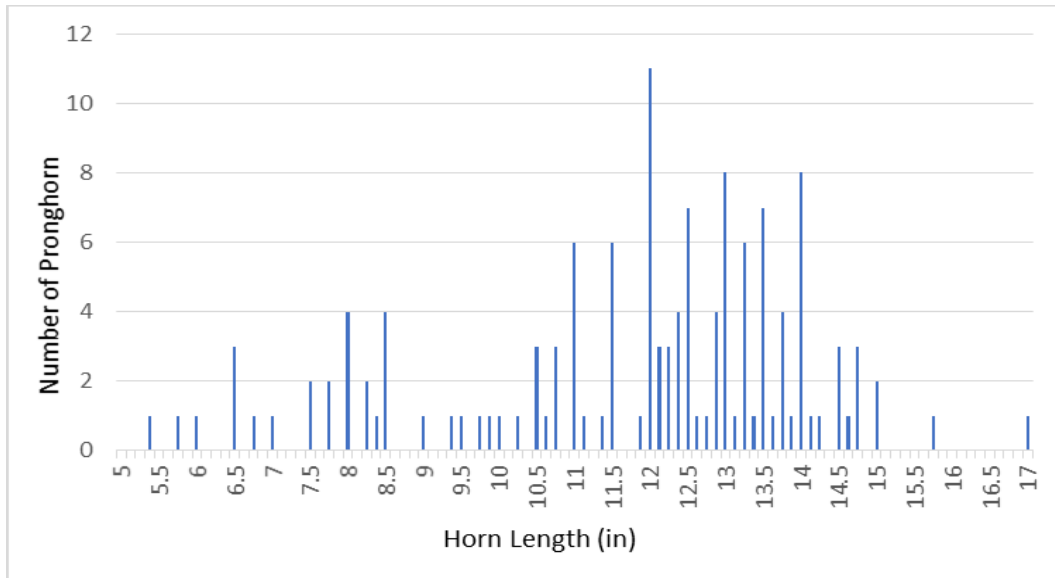


Figure 16. Horn length of pronghorn harvested in Kansas during the 2020 season.

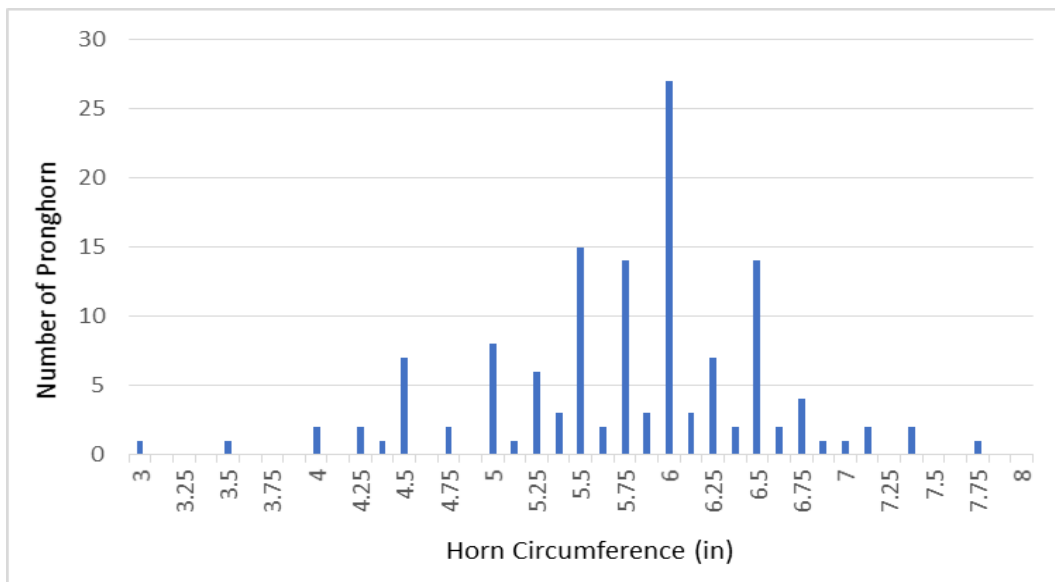


Figure 17. Horn circumference of pronghorn harvested in Kansas during the 2020 season.

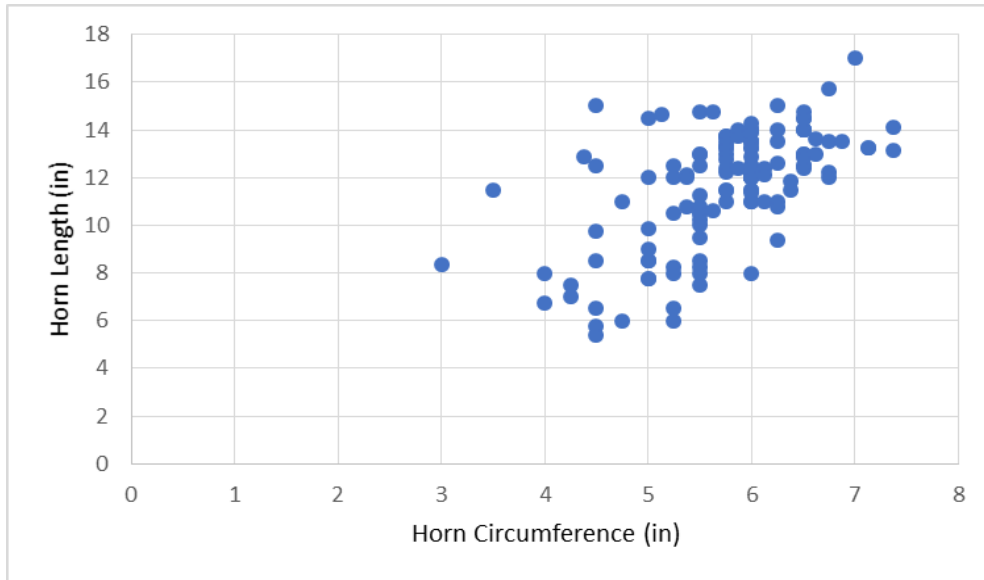


Figure 18. Scatterplot of horn length and circumference of pronghorn harvested in Kansas during the 2020 season.

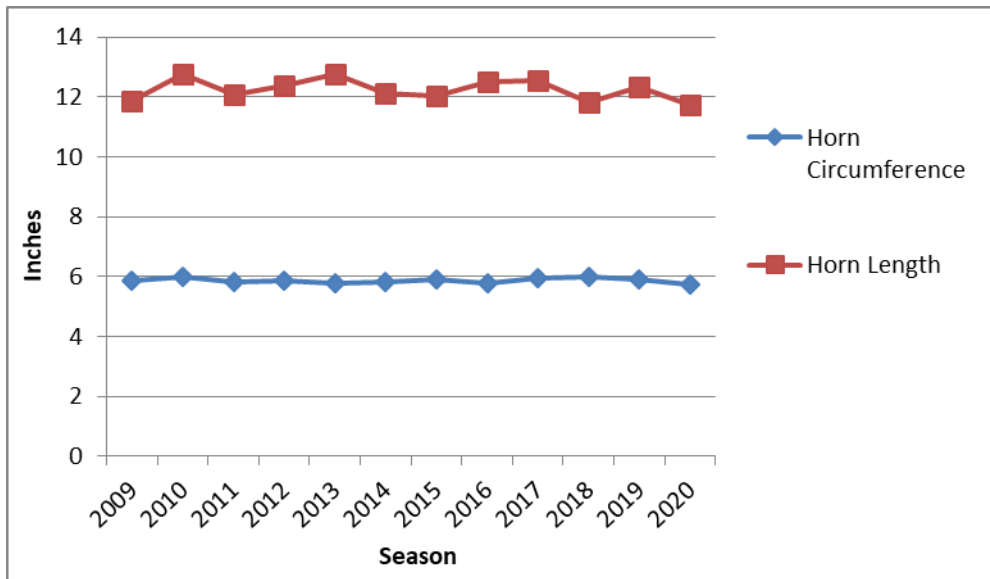


Figure 19. Mean horn length and circumference of pronghorn harvested in Kansas since 2009.

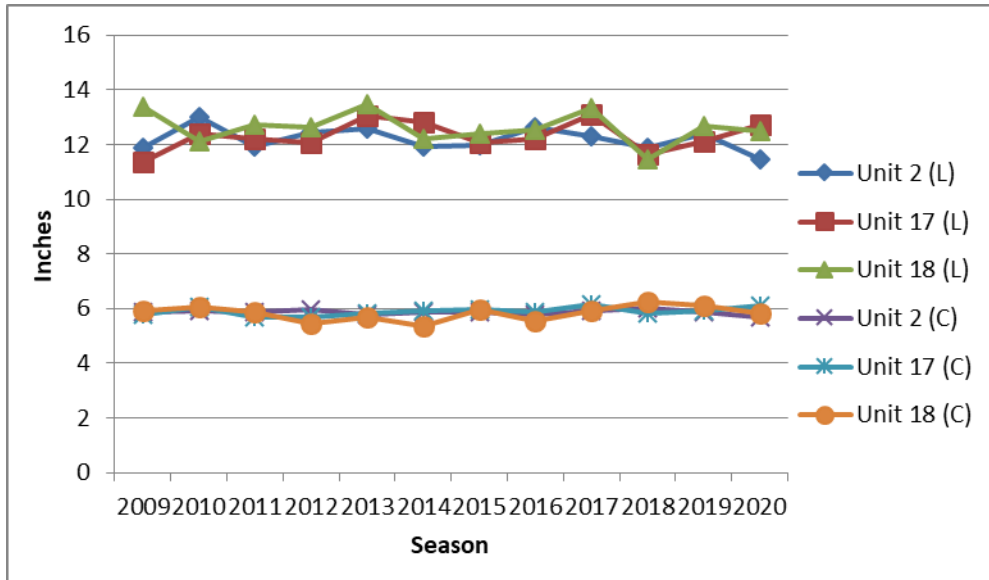


Figure 20. Mean horn length (L) and circumference (C) of pronghorn harvested in Kansas since 2009 by management unit.

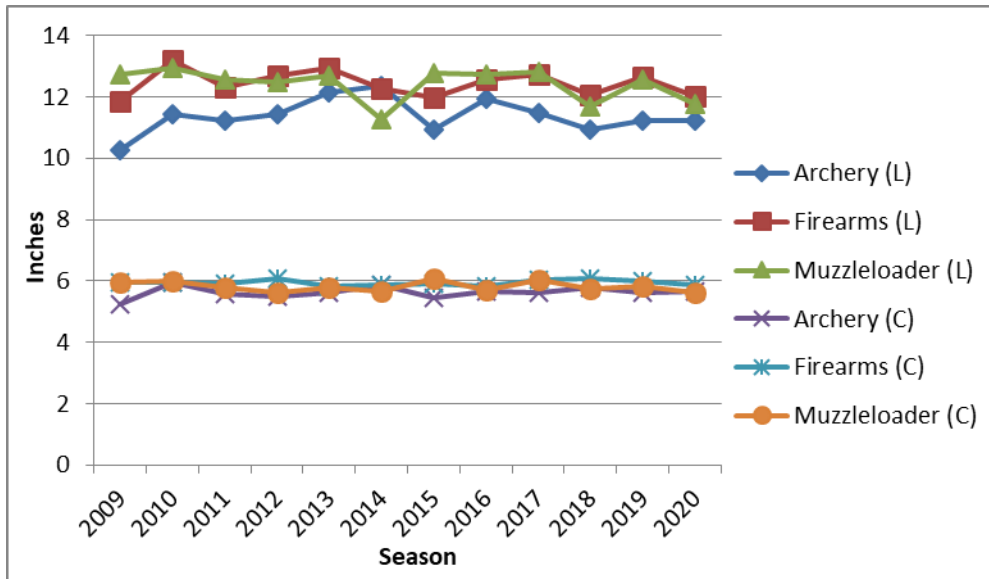


Figure 21. Mean horn length (L) and circumference (C) of pronghorn harvested in Kansas since 2009 by weapon of harvest.

Archery Equipment – Both the number of archery hunters (Fig. 5) and total harvest (Fig. 7) by archery hunters have increased substantially in about the past 10 years. The resulting impacts on the pronghorn herd far surpass those upon which unlimited harvest opportunity for archery hunters was originally based, and some hunters have expressed dissatisfaction with the amount of archery hunting pressure in traditional destination areas. These changes have the Department reassessing some aspects of the archery season.

In 2006, unlimited nonresident archery permits were established. In 2020, 9 of these permits were sold, and the 5-year average sales is just 7.4 per year. These permits are deemed to be an insignificant factor in increased archery harvest pressure.

Prior to 2012, crossbows were only allowed during archery season by hunters possessing a disability permit. In 2012, regulations were adopted allowing crossbows to be used during big game archery seasons by any hunter age 16 and under (youth) or 55 and older. In 2013, the opportunity to use crossbows during big game archery seasons was expanded to all archery hunters. The percent of archery hunters using each type of archery equipment is found in Figure 22, and the actual number of crossbow and non-crossbow archery hunters is presented in Figure 23. A comparison of crossbow and other archery hunter success rates is found in Figure 24.

Since 2013, crossbow hunters have comprised a steadily growing number and percent of total archery hunters in the state. However, it is uncertain whether crossbow hunters are additive to other archery hunters based on the data presented (i.e. whether these hunters would be hunting in the archery season with traditional equipment if they weren't allowed to use a crossbow). In addition, when crossbow hunters are removed from archery permit sales, current sales are still high averaging about 250 over the past 3 years, with 2020 permit sales being the second highest on record (with all years' crossbow hunters removed). Still, it appears the impact of crossbows on total hunter numbers is more meaningful than that on hunter success rates. In the last five years, crossbow hunter success has remained steadily but rather slightly above non-crossbow archery hunter success (average 7% above, range 5-9%).

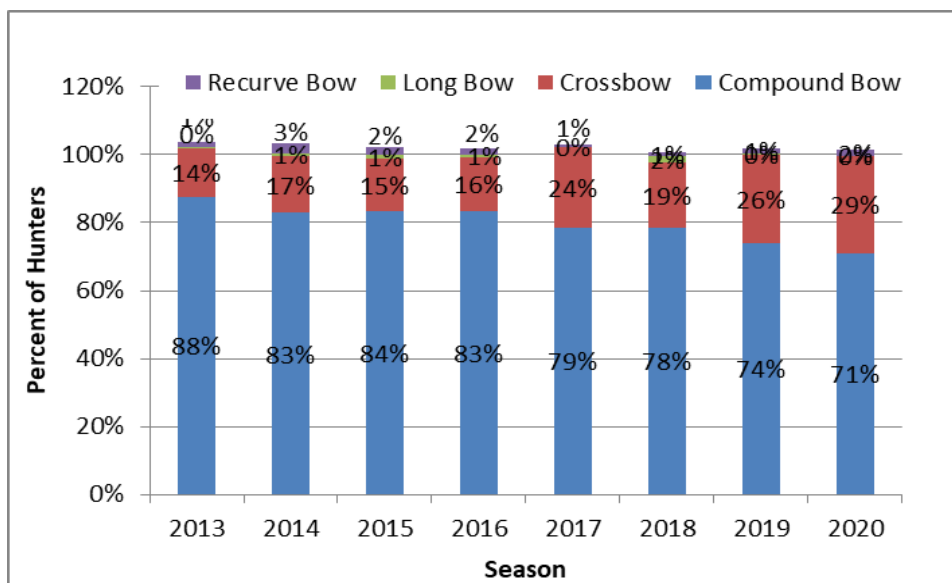


Figure 22. Percent of archery pronghorn hunters using different types of archery hunting equipment since 2013. (Totals exceed 100% some years because some hunters used more than one bow type.)

One other change that may be impacting archery hunter numbers was allowing hunters to purchase preference points toward limited draw permits while at the same time obtaining an

over-the-counter archery permit. This change took place in 2012, and seemingly resulted in an immediate jump in permit sales (see Fig. 5) which represented the most archery permit sales on record until this season. Analysis of license data is needed to more fully assess this aspect of archery permit sales. Pending the outcome of this analysis, the earliest recommended changes would take affect is the 2022 season.

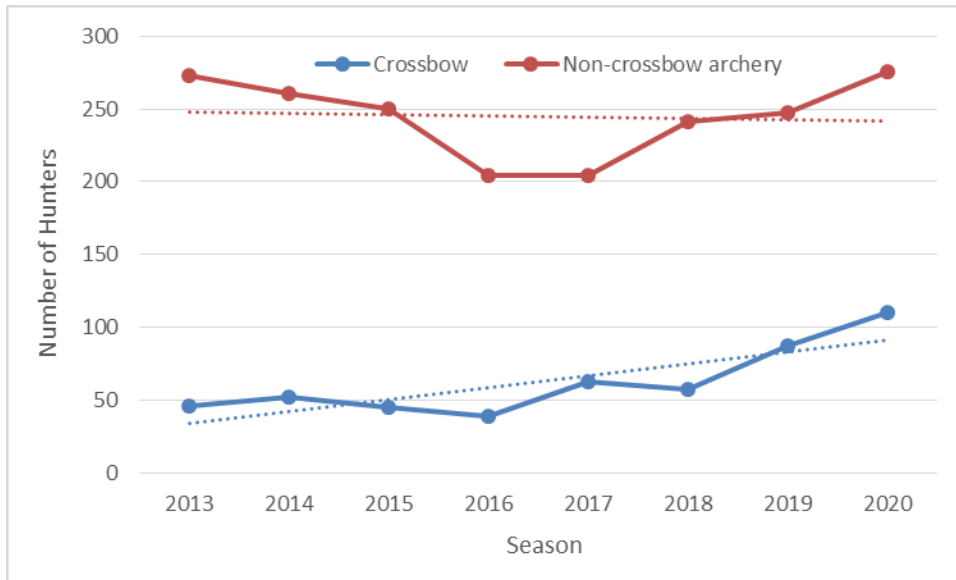


Figure 23. Number of active hunters using crossbows and not using crossbows (Non-crossbow archery) since 2013, and linear trendlines for each user type.

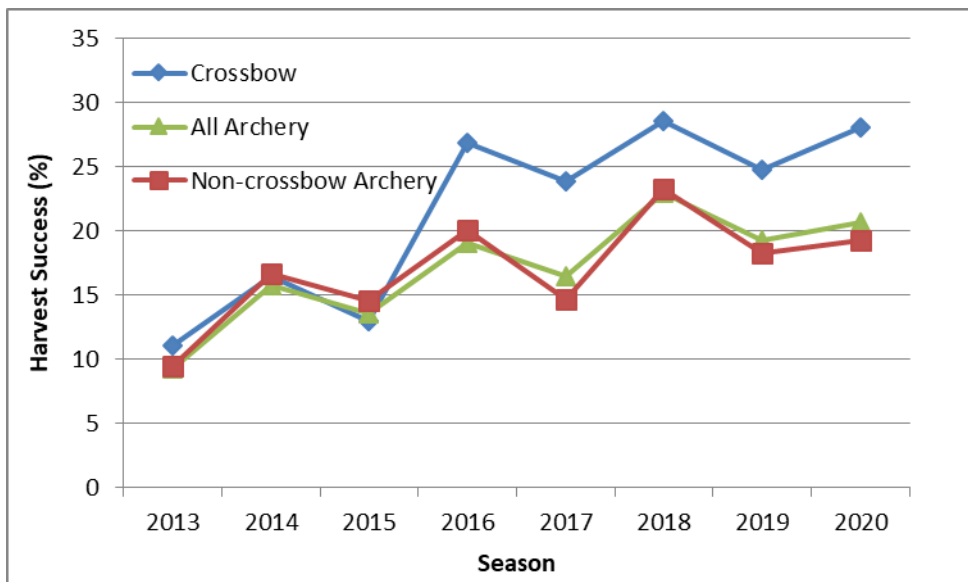


Figure 24. Harvest success rates by Kansas pronghorn hunters who used crossbows and all archery hunters combined.

EQUAL OPPORTUNITY STATEMENT

This program receives Federal financial assistance from the U.S. Fish and Wildlife Service. Under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972, the U.S. Department of the Interior and its bureaus prohibit discrimination on the basis of race, color, national origin, age, disability or sex (in educational programs). If you believe that you have been discriminated against in any program, activity or facility, or if you desire further information, please write to:

The U.S. Fish and Wildlife Service, Office of Diversity and Civil Rights Programs- External Programs, 4040 North Fairfax Drive, Suite 130, Arlington, VA 22203

Appendix 1.

2020 Antelope Draw Stats

Management Unit	Permit Type	Permits Authorized	Total # of Applicants (1st) Choice	Preference Points (PP)	Number of Permits issued by Pref Pt LO/T	Number of Permits issued by Pref Pt GEN	Total Number of Permits Drawn
Unit 2	Muzzleloader	15 LO/T 15 GEN	18 LO/T 99 GEN	0	13		15 LO/T 16 GEN
				1	2		
				2			
				3		11	
				4		4	
				5		0	
				6		1	
Unit 2	Firearms	55 LO/T 55 GEN	116 LO/T 478 GEN 3 NR TENANT	0	23		53 LO/T 53 GEN 2 YOUTH 2 NR TEN
				1	32		
				2			
				3			
				4		16	
				5		16	
				6		9	
				7		9	
				8		4	
				9		0	
				10		0	
				11		0	
				12		0	
13		1					
Unit 17	Muzzleloader	5 LO/T 5 GEN	1 LO/T 25 GEN	0	4		5 LO/T 5 GEN
				1			
				2			
				3		5	
Unit 17	Firearms	20 LO/T 20 GEN	35 LO/T 125 GEN	0	9		20 LO/T 20 GEN
				1	10		
				2	1		
				3		6	
				4		13	
				5		0	
				6		1	
Unit 18	Muzzleloader	2 LO/T 2 GEN	0 LO/T 15 GEN	0	1		2 LO/T 2 GEN
				1	1		
				2			
				3		2	
Unit 18	Firearms	4 LO/T 4 GEN	20 LO/T 66 GEN	0			4 LO/T 4 GEN
				1	3		
				2	1		
				3			
				4		2	
				5		1	
				6		0	
				7		0	
				8		1	
TOTAL		202	190 LO/T 808 GEN 3 NR TENANT				203
Preference points purchased 927			1001				

Appendix 2.

2020 Pronghorn Hunter Comments

Comments
BROKEN TOOTH, UNABLE TO INCLUDE
Can't wait for next year. I saw lots of animals and 1 really good trophy sized antelope
Couldn't find any went out looking for two days in Ln. County didn't find any
Didn't see as many antelope as I thought I would, but saw enough to keep interested. Had a great time. First time out and hopefully not the last. Please send me the estimation of the age of my buck from his teeth, I am curious to know! Thank you!!
Draught really reduced the numbers seen. Still enjoyed getting out, however saw very few antelope.
excellent on crop fields with fresh sprouts and saw fifty plus different antelope, the majority in wallace county exceptional hunt and very pleased with my trophy look forward to continuing the points program
First time hunting antelope and had a great time.
Fun but frustrating animals to hunt
Great experience!
Have never seen so many bow hunters out here.
Hunted a herd of about 20 antelope about 10 miles south of Goodland for 6 days. I got a shot at one but missed it.
Hunted hard on public ground and never seen an antelope. Better luck next time hopefully.
I CHIPPED HTE TEETH, I'M VERY SORRY
I did see more pronghorn in is that I could hunt than I did in the unit in Wyoming I could hunt.
I enjoyed the hunt but we didn't see near as many antelope in the western part of Hamilton county this year as we did last year. Not sure why.
I feel it should not take a tax paying landowner 4-5 years to receive a permit.
I had a non mortal injury to the antelope I shot. He spun and has an arrow in his horn.
I hunted the same area last year. Did not see near the antelope as I did in 2019.
I think I picked the hottest weekend in October, ever. I enjoyed myself, but it seemed like August.
It had been a few years since I had been back West. The pronghorn numbers were significantly reduced and the number of people hunting WIHA had significantly increased. Really wish this were a limited draw hunt.
It is something different to do right here in the great state of Kansas!
It would not show pictures of the map 2 questions back. Antelope was killed on private land. Once I get the antelope back I can email you guys the score
It's a tough hunt. But I wouldn't say impossible. There were opportunities but couldn't capitalize on them. Once found, you had a better idea of where they'd normally herd. Herds were only about 5-8.
Just not seeing very many antelope. Not sure what's going on but Gove has a fraction of what it used to.
knew numbers werent great, but i literally saw 7 total antelope driving hundreds of miles and hiking several also
Lot of fun, challenging to stalk.
Lots of fun but difficult to get close enough with archery . I really appreciate the WIHA program
Lots of people Saturday and Sunday of opener. Hard to find goats but Monday and Tuesday I could find goats on WIHA and got permission on some private. Had multiple opportunities just could never seal the deal.
My first antelope hunt and I found plenty of animals, but almost entirely on private land. Thankfully some networking gained me access.
need more WIHA- even if it's Antelope only. Also start season on a Saturday made it look like opening deer rifle season. Start bow season on Wednesday and make the season length like rifle deer.
Not sure I will try again. A close encounter with a rattlesnake has me terrified.
Number of pronghorn seemed low
Numbers are extremely low in the Sharon Springs area.
Pronghorn only had half his teeth so I only have one front tooth.
Saw very few antelope
Seems like numbers have declined

SENT TO TAXADERMY BEFORE READING SURVEY

Suggest that WIHA properties be open during antelope season. I observed multiple antelope on WIHA property not yet available for hunting.

Thank you for the WIHA program!

The amount of hunters was ridiculous. I have been hunting for 4 years out west for antelope and there has always been hunters, but this year was way over crowded. It almost wasn't even fun. I get to hunt some private ground through a friend and there was so much trespassing it was unbelievable. There isn't enough public hunting opportunity or enough antelope period to support the amount of hunters. KDWPT should rethink the amount of licenses they are giving out especially to out of state hunters.

The numbers were down throughout Greeley and Wallace counties. We saw some better quality bucks, but numbers are were down.

The overlap of early archery antelope and muzzleloader deer leaves some uncertainty about blaze orange requirements. I made several phone calls and it was difficult to get a straight answer. To me, an early archery season in which you are required to wear orange the entire season makes it not a very useful season.

this is a difficult hunt with Archery gear, but it wont be My last

This was a miserable experience. We applied and were drawn according to the language set forth on the Kansas Department of wildlife website. We were stopped by Officer (withheld) who determined we were not eligible for the permit that we had. End of story. We were eligible under the guidelines of which to apply for the hunt. We did apply for the hunt and were awarded a permit. Before having a chance to harvest an animal the warden decided our permits were invalid. Someone needs to take a hard look at the language and simplify the process and the language of applying for Kansas antelope. It's not like we're applying to hunt an extinct animal. Most likely my hunting days in Kansas are definitely over

Tougher than I thought it would be. Passed on a nice buck in hope of harvesting a bigger one I spotted

unexpected travel outside of KS did not allow me to hunt pronghorns

Unseasonable warm weather

Very few animals compared to the numbers I was expecting to see.

Very few antelope this year. More hunters than antelope it was absolutely terrible. Worse I have seen it in 10 years.

Very few pronghorn observed over the past two years in Unit 2 compared to pre-2016. The high number of hunters combined with the low number of animals are impacting the quality of the hunting experience.

Very happy with pronghorn population and wildlife management.

walk in hunting atlas roads are not marked correctly

Was a fun, challenging hunt. Did not see near as many antelope this year as last year.

way too many hunters lots of hunting pressure also tried to complete online but would not load page. crossbow shouldn't be allowed

We hunted a large portion of ground and only saw 1 buck pronghorn not in range to shoot

we were harvesting and I didn't get to give it the time I would have liked .

While i did see antelope there, the problem was watching everyone shoot them off the road. I did not see one other hunter away from his vehicle hunting and all the antelope i seen being cleaned were within 200yds from the road and in the wide open. I know they did not hunt them legally. It takes quite some time to draw a tag and the season is short i would hope thestate of Kansas would have more game wardens working in the hunt areas. I literally watched them run the antelope across the fields for miles and then jump out and shoot at them leaning over the hood, i managed to stop one hunter from killing one that had its tounge hanging out of his mouth from being pushed. I think the numbers are good for animals but bad for hunter numbers and short number of days

Would like to see the Firearms season span 2 weekends because of wind in Western Kansas

Would love to see more pronghorn on the landscape. Seemed to be fewer around than normal. Only saw 3 on wiha.